

Dr. S. Jayakumar, B.E., M.E., Ph.D.

#5/767-G.,Muneeshwarnagar Extension,3rd cross,
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Career Objective

To pursue a challenging career and be a part of progressive organization that gives me scope to enhance my knowledge, skills and reach the pinnacle in the field with determination, dedication and hard work.

Education

Qualification	Specialization	College, University/School, Board	Month & Year of Passing	Marks Secured
Ph.D.	Information & Communication Engineering	Anna University, Chennai	August, 2018	
M. E	Applied Electronics	St Peter's engineering college , Anna University, Chennai	June, 2008	75 %
B. E	Electronics & Instrumentation Engineering	Annamalai University, Chidambaram	May, 2005	7.2 CGPA
HSC	Mathematics, Physics, Chemistry, Computer Science	St. Joseph MHSS, Hosur Tamil Nadu, State Board	March, 2001	78.5%
SSLC		St. Joseph MHSS, Hosur Tamil Nadu, Matriculation	March, 1999	80%

Career Summary

Organization	Designation	From date	To Date	Experience Year/ Month
Sri Sairam College of Engineering Bangalore	Associate Professor	17/10/2022	Till Date	1.3Years
KCG College of Technology/ (A Unit of Hindustan)Chennai	Assistant Professor (S.G)	17/06/2019	02/08/2022	3.2 Years
Adhiyamaan College of Engineering/Hosur	Assistant Professor	13/06/2008 23/12/2013	09/06/2014 29/04/2019	10Years & 1 Months
BCET/ Bangalore	Lecturer	04/07/2005	21/02/2006	6 Months
Shiridi sai Engineering/Bangalore	Lecturer	22/02/2006	21/06/2006	4 Months
Total				16.7 Years

Inherent capabilities as a faculty and Administrative activities carried out

- **Research Coordinator** for the College level
- **NBA coordinator** for Criteria-1 and **NAAC coordinator** for Criteria-1.

- Industrial visit Coordinator
- Department Project and mini project coordinator
- Students Affairs in charge.
- Played an influential role in generating, compiling and filing of **NBA** and **NAAC** files for the department.
- Played an instrumental role in preparing and compiling inspection report for the Department of Electronics and Instrumentation engineering, which was conducted by Anna University Chennai.
- **Internal soft skill trainer** for placement activities in college.
- Coordinator for ISO for the Department of Electronics and Instrumentation Engineering.
- Organizing committee member for a national level student's symposium.
- Actively participated in *Curriculum Development (Member of Board of Studies)*.

Book Publication:

- Wireless Communication Networks by G.Sudha, Dr.S.Jayakumar, Shalemu Raju Matta,Dr.Suraj Srivasta,Scientific International Publishing Home. **ISBN:978-97-5757-184-5**
- *Jayakumar, S & Sumathi, A, 2019, "High-Performance FIR Filter Implementation Using Anurupye Vedic Multiplier" is published in Lambert Academic Publishing, ISSN: 978-613-9-94432-3*

Book Chapter Publication:

- Mobile healthcare apps for patients, Dr.S.Jaykumar,Hema Shubraja J,Dr. Minimol V K, V. Gokul & V. Devatarika,ESN Publications, ISBN : **978-93-95196-77-2**.
- Utilization of Digital Tools in the Indian Higher Education System During ,S. Jayakumar,Monika,V. S. Karpagavalli,B. Uma Maheswari,Sampath Boopathi,IGI Global, **ISBN: 9781799892137**.

Research Publications

1. Performance Analysis of a Seven-Level Multilevel,E. Parimalasundar, **S. Jayakumar** , T. Devaraju1, V. S. Chandrika ,International Journal of Electrical and Electronics Engineering,Volume 10 Issue 6, 9-22, June 2023.
2. Enhanced Design and Performance Analysis of a Seven-Level Multilevel Inverter for High-Power applications,Parimalasundar, E.,**Jayakumar, S.**,Nagajothi, P.,...Devaraju, T.Suresh, K.Proceedings of the 2023 2nd International Conference on Augmented Intelligence and tainable Systems, ICAISS 2023, 2023, pp. 1862–186
3. Efficient Integration of Photovoltaic Cells with Multiport Converter for Enhanced Energy Harvesting Parimalasundar, E., **Jayakumar, S.**, Chandrika, V.S., ...Devaraju, T., Suresh, K.Proceedings of the 5th International Conference on Inventive Research in Computing Applications, ICIRCA 2023, 2023, pp. 1590–1595.
4. Integrated Project for Data Communication in Singh, C., **Jayakumar, S.**, Venneti, K., ...Kushwaha, S., Kalpana, P.E. Proceedings of the 2nd IEEE International Conference on Advances in Computing, Communication and Applied Informatics, ACCAI 2023, 2023
5. **S.Jayakumar**,Anil,Panna,Darshan,Suhas(2023).Accident Detectionand Alert system using IoT. IJIRAE:: International Journal of Innovative Research in Advanced Engineering, Volume 10, Issue 06 of 2023 pages 285-289.

6. Parimalasundar E, S. **Jayakumar**, Ravikumar R, Suresh K (2022), Investigation analysis of open circuit and short circuit fault on cascaded H-bridged multilevel inverter using artificial neural network approach. IJEER 10(2), 320-326. DOI: 10.37391/IJEER.100243. (Scopus)
7. **S. Jayakumar** , Ranjith kumar R, Tejswini R, & Kavil S. (2021). "IOT based Health Monitoring System. Advances in Parallel Computing Technologies and Applications", IOS press, vol. x 40, pp 193-200. <https://doi.org/10.3233/apc210140>. (Scopus)
8. **S. Jayakumar** , Lokesh Kumar K, Purva Darshini S K, & Sanjeev D. (2021). "Traffic Monitoring System using IOT and DL". Advances in Parallel Computing Technologies and Applications. vol. 40, pp 201-210. <https://doi.org/10.3233/apc210141>(Scopus)
9. J.S.Prasath, S. **Jayakumar**, U. Ramachandraiah, "Embedded System based Automobile Exhaust Gas Monitoring for Human Safety," International Journal of Advanced Science and Technology, vol. 29, No. 10S, pp. 6846-6849, 2020. (Scopus)
10. R.Selvam, T.Anuradha, **S.Jayakumar**, P.M.Venkatesh (2020), "IOT based Energy Management for Hybrid Solar and Wind Energy System" International Journal of Future Generation Communication and Networking, vol.13, no.2, pp.426-438 ISSN: 2233-7857. (Scopus)
11. J.S. Prasath, S. **Jayakumar**, K. Karthikeyan, "Real-Time Implementation for Secure monitoring of Wastewater Treatment Plants using Internet of Things," International Journal of Innovative Technology and Exploring Engineering, vol. 9, Issue 1, pp. 2997-3002, 2019. (Scopus)
12. **S.Jayakumar**, R.Selvam, K.Karthikeyan, R.Natesan(2019), "Design and Implementation of Hybrid FIR Filters using Vedic Multiplier and Fast Adders" International Journal of Recent Technology and Engineering (IJRTE) Volume-8 Issue-4, November 2019 ISSN: 2277-3878.(Scopus)
13. **Jayakumar, S** & Sumathi, A, 2016, 'High-Performance FIR Filter Implementation Using Anurupye Vedic Multiplier,' Circuits and Systems, vol., 7, no 11, pp. 3723-3733. (Annexure –I)
14. **Jayakumar, S** & Sumathi, A, 2016, 'Design and Implementation of Cryptographic Shared Processor using FPGA,' Asian Journal of Research in Social Sciences and Humanities,' vol.6, no. 9, pp. 1371-1381. (Annexure –II)
15. **Jayakumar, S** & Sumathi, A, 2013, 'Review Article: Power Optimization Techniques for Multipliers,' European Journal of Scientific Research, vol. 100, no 4, pp. 592-597. (Annexure –II)
16. **Jayakumar,S**, Sumathi, A & Saranraj, S, 2017,'8-bit kogge stone adder design for FIR Filter applications'Advances in Natural and Applied Sciences, vol.11, no 6, pp. 37-42. (Annexure –II)
17. **Jayakumar, S**, Sumathi, A, Santhosh Kumar, P, Suganthan, M, Syed Hanies, S, 2017, 'Area Efficiency And High Speed Implementation of Cryptography Using Hash Function and RSA Algorithm,' Advances in Natural and Applied Sciences, vol., 11, no. 6, pp. 30-36. (Annexure –II)
18. **Jayakumar, S**, Sumathi, S Balasubramanian, S Dhayanand.M & Dhivakar, 2017, 'Health Monitoring System For Elderly People Using Iot,' Advances in Natural and Applied Sciences vol .11, no 6, pp. 26-29. (Annexure –II)
19. **Jayakumar, S**, Amaresh, N, Jayakumar, Krishna, D, Manjunath, K, 2016, 'Design and Implementation of High Speed Vedic Multiplier for DSP Applications,' International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, vol., 5, no. 1, pp. 45-50. (Annexure –II)
20. **Jayakumar,S**, Meshamaimoon, S, Priya, M, Sharmila, S, 2016, 'Terminal Automation System,' International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, vol .5, no. 1, pp. 51-54. (Annexure –II)

21. **Jayakumar,S**, Priyadharshini, S, Priya Shanmugam, Sharmila A, S, 2016, ‘A portable fault detection and Altering system by a k-NN algorithm using GSM, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, vol .5, no. 1, pp. 55-58. (Annexure –II)
22. **Jayakumar,S** Vaithyanathan, G Venkatesan, K Sivaramakrishnan, S Siva, S,“Simulation and implementation of Vedic multiplier using VHDL code,” International Journal of Scientific & Engineering Research, vol.4, 2013. (Annexure –II)
23. **Jayakumar, S**. Gowtham, T. Kaniarasan, A. Karthick Raja, 2019 “Study & material balance of sulphuric acid plant and performance of boiler and methods to improve its efficiency”, International Journal of Research and Analytical Reviews (IJRAR), , Vol. 6, no.2., pp.596-602. . (Annexure –II)
24. Praveen Raaj S, Thirunavukkarasu A, Venkatesan S, Vijayakumar E, **.S.Jayakumar**, “To design equipments for effective production of MEK from SBA” International Journal of Research and Analytical Reviews (IJRAR), , Vol. 6, no.2.,pp. 728-733.

International Conference Publications

1. Paper presented in Efficient Integration of Photovoltaic Cells with Multiport Converter for Enhanced Energy Harvesting Proceedings of the 5th International Conference on Inventive Research in Computing Applications, ICIRCA 2023
 2. Paper presented in Enhanced Design and Performance Analysis of a Seven-Level Multilevel Inverter for High-Power applications, Proceedings of the 2023 2nd International Conference on Augmented Intelligence and tainable Systems, ICAISS 2023, 2023, pp. 1862–1868
 3. Presented a paper entitled “IoT Based Health Monitoring system”, International conference on advanced in parallel computing technologies and Applications (ICAPTA 2021) held at Justice Basheer Ahmed Sayeed College for women, Chennai on 15th -16th April, 2021.
 4. Presented a paper entitled “Traffic Monitoring System Using IoT and DL”, International conference on advanced in parallel computing technologies and Applications (ICAPTA 2021) held at Justice Basheer Ahmed Sayeed College for women, Chennai on 15th -16th April, 2021.
 5. Presented a paper entitled “Embedded System based Automobile Exhaust Gas Monitoring for Human Safety” in International conference on Integrated Advanced Technology held at KCG College of Technology, Chennai on 12th June, 2020.
 6. Presented a paper entitled “IOT based Energy Management System for Hybrid Solar and Wind Energy” at an International conference on Latest Trends in Engineering and Management held at IFERP-Pondicherry on 20th & 21st October 2019.
 7. Presented a paper entitled “Design and Implementation of Hybrid FIR filters using Vedic Multiplier and Fast Adders“ at an International conference on Emerging Trends in Engineering Technology Management and Sciences held at Ashoka Institute of Engineering and Technology, Hyderabad on 23rd & 24th September 2019.
 8. Presented a paper entitled ‘High speed Vedic multiplier for Image processing using FPGA,’ Proceeding of 10th **IEEE International Conference** on Intelligent Systems and Control (ISCO), Coimbatore, India, 2016, pp. 1-4.
 9. Presented a paper entitled, ‘A Radix-4 Modified Booth Encoded Multiplier Design and Implementation using FPGA, in ICEE- 2K12, JITE Thoppur on March 19, 2012.
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Ph.D. Research Topic

Analysis on High Performance Vedic Multipliers and Fast Adders for FIR Filter Implementation Used in Image Processing Applications

Funded Project Applied

- Design and Implementation of Health Monitoring system using IOT, **VGST, 17 Lakh.**
 - SMART WEARABLE DEVICE FOR WOMEN SAFETY USING IOT & ARTIFICIAL INTELLIGENCE TECHNIQUES, **DST, 24,37,000.**
 - Real Time Breast Cancer detection using Machine Learning algorithms and Implement using VLSI Technology, **DST, 25,90,000**
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Events organized:

- A method of Writing research article and successful resource proposal on 9.09.23 at Sri Sairam College of Engineering, Bengaluru.
 - Angel Investment/ VC Funding Opportunity for Early Stage Entrepreneurs on 09.06.23 at Sri Sairam College of Engineering, Bengaluru.
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Certificate Courses Completed

- Completed NPTEL course on “Digital Electronics” 2023.
 - Completed NITTT course on Module 3- 2023.
 - Completed one line course e- learning program on PLCs on the topic “Capability development” offered by TATA Steel on 13th April 2020.
 - Completed one line course on the topic “AI (Artificial Intelligence) for Everyone” offered by Coursera on October 4th 2020.
 - Completed one line course on Programming on the topic “Matlab on Ramp” offered by MATLAB TRAINING SERVICES on May 1st 2020.
 - **Certified Zone Trainer** from **Junior Chamber International**, India 2013, qualifying various ladder of training excelling Effective Public Speaking and Speech Craft.
 - **Certified as 21st Century Educator from Aricent group**, “A five month blended learning program for professional development of educators” held at Adhiyamaan College of Engineering, in association with NASSCOM Foundation and Quest Alliance.
 - A course on “FPGA Based Design Using ALTERA EDA TOOL” held at VIT University during October 29-31, 2010 by VLSI division school of electrical engineering, VIT University, Vellore.
 - Hands on training program on “FPGA Design Flow & Implementation in Xilinx Platform using Verilog HDL” held at VIT University during February 4-5, 2011, by VLSI division school of electrical engineering, VIT University, Vellore.
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Courses Attended

- Participated in “Artificial Intelligence” Faculty development program” organized in Vignana Bharathi Engineering College during the duration 22-05-2020 to 26-05-2020.
 - Participated in “Research, Funding Projects & IPR” workshop organized in IETE and Institution's Innovation Council (IIC) during the duration 07/05/2020 to 10/05/2020.
 - Participated in “Research, “Virtual teaching” workshop organized in (TLC) Coimbatore Institute of Technology during the duration 20/04/2020 to 21/04/2020.
 - Participated in webinar “Role of Internal Academic and Industrial Audit(IAAA)” workshop organized in Adhiyamaan college of Engineering during the duration 02/12/2020 to 03/12/2020.
 - Participated in “Opportunities & Challenges in Electronics & Allied Industries in India post COVID-19” at Vivekanand Education Society's Institute of Technology on May 5th-30th 2020.
 - Participated in webinar “Effective methods of writing paper” at Effective methods of writing paper on May 28th 2020.
 - Participated in “FDP ON ANALOG DISCOVERY KIT” held at KCG COLLEGE OF TECHNOLOGY on August 3rd 2019.
 - Participated in “Train the Trainers” workshop organized by Adhiyamaan College of Engineering during the duration 28 to 31 March 2016.
 - 4-Days workshop on “Mission 10X ULTP- Practitioner Workshop” organized by Mission 10X, Wipro Technologies in Adhiyamaan College of Engineering during the duration 28 to 31 March 2016.
 - 3-Days workshop on “Mission 10X Faculty Empowerment Workshop” organized by Wipro in Adhiyamaan College of Engineering during the duration 19 to 21 November 2015.
 - Participated in the AICTE sponsored Faculty Development Program on “Visual System Programming” held on 23rd September to 7th October 2013 organized by department of ECE at Shirdi Sai Engineering College, Bengaluru.
 - Participated in the AICTE sponsored “Faculty Development Program on LateX” held on 28th and 29th June 2013 organized by department of EIE at Adhiyamaan College of Engineering, Hosur.
 - Participated in the AICTE sponsored “Nanotechnology for sustainability: Energy Conservation and Storage” held on 6th to 18th May 2013 organized by department of EEE at K.S.Rangasamy College of Technology, Thiruchengode.
 - Participated in the AICTE sponsored “Recent Advancement in Intelligent Measurement and Control” held from 19th to 30th April 2010 organized by department of Department of Applied Electronics & Instrumentation Engineering at J.J College of Engineering Technology, Tiruchirappalli.
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Patents: (Indian Patent)

Publication Published	:	04
No of patent Grant	:	02

Areas of Expertise

- Linear Integrated Circuits
- VLSI Design
- Process Instrumentation
- Electronic Devices and Circuits
- Sensors & Transducers
- Microprocessors and Microcontrollers
- Digital Signal Processing
- Digital Logic Circuits
- Industrial Instrumentation
- Biomedical Instrumentations

Software Skills

- MATLAB
- Simulink
- PSpice
- VHDL
- Xilinx ISE

Leadership Activities, Professional Memberships and Achievements

- **Reviewer** for IEEE International Conference 2023.
- Received **best supervisor** award in IET PROJECT CHALLENGE 2021 for mentoring student projects in KCG college of Technology, Chennai on April 10th 2021.
- Received **best mentor award** in ideathon event 2021 for mentoring student projects in KCG college of Technology, Chennai on May 1st 2020.
- **Reviewer** for *Scientific Research Publishing* and *Inderscience Publishers* - linking academia, business and industry through research.
- **Reviewer** and active membership in Institute for Engineering research and publication **ID: PM23849716**.
- **President** in Junior Chamber International 2013.
- Interdisciplinary **Member for the board of studies** in the faculty of Electronics and Communication Engg.,(UG & PG) for the year 2018-2021.
- Secured Individual Championship in Athletics events held in school and division level events.
- Member of **The Institution of Engineers (India)** with the membership **ID: M-151451-7**.
- Member of Junior Chamber International (India) with the membership **ID: 1207946**.
- Secured **best project award**–for “**Mission 10X ULTP- Practitioner Workshop**” organized by Mission 10X, Wipro Technologies in Adhiyamaan College of Engineering during the duration 28 to 31 March 2016.4-Days workshop.

Invited as Resource person

Invited as a **resource person to conduct soft skill training** for various colleges, Schools and Industries to enhance their job opportunities from 2013-2021.

Personal Dossier

- Date of Birth : 31st October 1982
 - Language Known : English, & Tamil
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I hereby acknowledge that all the information in this document is true and accurate.

Dr. S. JAYAKUMAR